

Claims

1. Device for controlling and actuating a vibrating mechanism, especially in soil tamping machines, having a hydraulic pump (12) which drives a hydraulic motor (18) which interacts with the vibrating mechanism (10) as part of a hydraulic circuit (16), to which in the secondary branch (20) a pressure regulator (22) is connected which can be controlled by a hydraulic switching means (24).
2. The device as claimed in claim 1, wherein in the base position the hydraulic switching means (24) is at the "off" position in which the fluid-carrying input (connection N) of the switching means (24) is relieved to the tank pressure.
3. The device as claimed in claim 2, wherein the switching means (24) has an energy storage device, especially in the form of a reset spring (28) which tries to hold the switching means (24) in its "off" position.
4. The device as claimed in one of claims 1 to 3, wherein two opposing control inputs (42, 44) of the pressure regulator (22) are connected to its fluid input (46) and wherein one of these control inputs (44) is connected to the input (connection N) of the switching means (24) to carry fluid.
5. The device as claimed in claim 4, wherein a throttle valve (48) is connected to the connecting line between the control inputs (42, 44) of the pressure regulator (22) and the switching means (24) and upstream of the branch to one of the control means (40) for the pressure regulator (22).

6. The device as claimed in claim 5, wherein the pressure adjustment value of the throttle valve (48) corresponds to the pressure adjustment value of a set spring (54) on the pressure regulator (22) which is assigned to the control means (40) to which the throttle valve (48) is connected.
7. The device as claimed in claim 6, wherein the pressure regulator (22) spring-reinforced assumes a blocking position which interrupts the fluid-carrying connection between the input (46) of the pressure regulator (22) and tank (T) and establishes the pertinent fluid-carrying connection in the passage position.
8. The device as claimed in one of claims 1 to 7, wherein the switching means (24) is a 2/2-way valve.
9. The device as claimed in one of claims 1 to 8, wherein the two opposing control spaces (32, 34) of the switching means (24), especially in the form of a 2/2-way valve, can be connected to each other to carry fluid.
10. The device as claimed in claim 9, wherein an excess of force is produced in the control space (32) by the different area ratios in the two control spaces and keeps the switching means (24) in the "operation" position against the combined forces resulting from the energy storage device (28) and the hydraulic force of the control space (34).
11. The device as claimed in one of claims 1 to 10, wherein by means of the pressure reducing valve (60) in the continuing hydraulic circuit (58) the system pressure produced by the hydraulic pump (12) can be lowered to a definable value for the hydraulic drive (56) of the soil tamping machine.

12. The device as claimed in one of claims 1 to 11, wherein there is a pressure limiting valve (52) for safeguarding the maximum pressure.